

CLAIMS

We claim:

1. A cathode, said cathode formed by a cylindrical hollow part closed at a first end and open at the opposed end in which on at least an outer or inner portion of said cylindrical surface includes a layer of getter material.
2. The cathode as recited in claim 1, wherein said cylindrical hollow part is made essentially of metal.
3. The cathode according to claim 2, wherein said metal includes material chosen from among the group consisting of nickel, molybdenum, tantalum and niobium.
4. The cathode as recited in claim 1, wherein said layer of getter material is formed of a metal selected among the group consisting of: titanium, vanadium, yttrium, zirconium, niobium, hafnium, and tantalum.
5. The cathode as recited in claim 1, wherein said layer of getter material is an alloy that includes zirconium or titanium combined with one or more elements selected among the group of transition metals and aluminum.
6. The cathode as recited in claim 1, wherein said getter layer is formed by cathodic deposition.
7. The cathode as recited in claim 1, wherein said getter layer is formed by electrophoretic deposition.
8. A method for the production of a cathode, including the steps of:

forming a cylindrical hollow part, wherein said cylindrical hollow part is closed at a first end and open at the opposed end; and

at least partially coating said cylindrical hollow part with a getter layer on the outer or inner portion of said cylindrical hollow part by the technique of cathodic deposition.

9. The method as recited in claim 8, wherein said layer of getter material is formed with thickness less than 20 μm .

10. The method as recited in claim 8, wherein coating step includes a masking step, wherein said masking includes covering said cylindrical hollow part with a suitably shaped supporting element.

11. A method for the production of a cathode, including the steps of:
forming a cylindrical hollow part, wherein said cylindrical hollow part is closed at a first end and open at the opposed end; and

at least partially coating said cylindrical hollow part with a getter layer on the outer or inner portion of said cylindrical hollow part by the technique of electrophoretic deposition.

12. The method as recited in claim 11, wherein said coating step of one or both inner and outer surfaces occurs by partially dipping said cylindrical hollow part in a liquid suspension containing getter particles used for the deposition.

13. A method as recited in claim 12, wherein said cylindrical hollow part is made of tantalum, molybdenum or niobium; and said layer of getter material is formed by dipping said cylindrical hollow part in a molten bath of said getter metal or alloy of which said layer is to be made.

14. The method according to claim 12, wherein said coating of one or both inner and outer surfaces of said cylindrical hollow part occurs by partially dipping said cylindrical hollow part in said molten bath.

15. The cathode as recited in claim 1, wherein said layer of getter material is less than 20 microns thick.

16. A method for the production of a cathode, including the steps of:
forming a cylindrical hollow part, wherein said cylindrical hollow part is closed at a first end and open at the opposed end; and

a step for at least partially coating said cylindrical hollow part with a getter layer on the outer or inner portion of said cylindrical hollow part.